

REMARKS

Claims 1-6 are all the claims pending in the application. Claims 1-6 are rejected.

SPECIFICATION:

The Examiner objects to the disclosure because of two informalities. Applicants amend the specification to address the informalities and request withdrawal of the objection.

35 U.S.C. § 102:

Claims 1 and 3-6 are rejected under 35 U.S.C. § 102(b) as being anticipated by Mikame et al (U.S. Patent 5,724,929 [hereinafter "Mikame"]). Applicant traverses this rejection in view of the following remarks.

An exemplary embodiment of the present invention addresses problems in the prior art by providing a surface treatment that increases the hardness of an engaging hole. As described in claim 1, the surface treatment is given to an internal surface of the engaging hole and an area surrounding the engaging hole. The present specification notes that the hardening process of the entire sprocket is not necessarily adapted. Instead, a partial hardening process is used that focuses on a particular area of the sprocket. This allows for an efficient manufacturing process, while not affecting other parts of the sprocket that may not necessarily benefit from the hardening process. (See the specification, page 14, last full paragraph extending onto page 15.)

The Examiner contends that Mikame discloses the claimed features, including the engaging hole having a surface treatment. In particular, the Examiner asserts that Mikame discloses a sprocket 51, a second rotor 52, a lock pin 60 and a plate 53 having an engaging hole

533. In regard to the surface hardening, the Examiner cites col. 9, lines 6-9. As noted in col. 9, Mikame discloses that the material of the plate is subjected to hardening. (Col. 9, lines 35-38.) However, the features of claim 1 are not disclosed by Mikame.

Mikame does not define particular areas of the plate 53 that do and do not include a treated surface. On the other hand, claim 1 defines a physical area of the valve timing adjusting device that has a surface treatment aspect and an area of the rotor that does not include the surface treatment. Mikame does not disclose (nor teach or suggest) the claimed device having the unique surface treatment configuration, nor does Mikame recognize the beneficial aspects afforded by these features, as discussed in the present specification. Withdrawal of the rejection of claim 1 is thus required, along with the rejection of claims 3-6 at least because these claims depend from claim 1.

Claims 1, 3, 4 and 6 are rejected under 35 U.S.C. § 102(e) as being anticipated by Miyasaka (U.S. Patent 6,497,208). Applicants traverse this rejection in view of the following remarks.

The Examiner contends that Miyasaka discloses a housing member 4, a second rotor 15, a locking pin 37 and an engaging hole or member 44. In regard to the claimed surface hardening, the Examiner cites col. 6, lines 30-34 and Figs. 5A-5C. This section of Miyasaka describes the engaging member as being made from a surface hardened alloy or a quenched chromium-molybdenum steel. However, the engaging member is embedded in the plate member 7. (See

col. 6, lines 31-35 of Miyasaka). As noted on page 5 of the present specification, a detriment of prior devices is that a discrete part needs to be made for each device and then press-fit into place. As a result, manufacturing costs are increased.

Amended claim 1 describes the engaging hole as having an internal surface that is formed from the corresponding rotor. Miyasaka does not disclose this feature because the applied member 44 does not have an internal surface that is formed from one of the applied rotors. Instead, the member 44 is a separate part having its own internal surface and which is embedded into the plate member 7. Accordingly, Applicants submit that the internal surface of the member 44 is not formed from the applied rotor and does not disclose the features of claim 1. Withdrawal of the rejection of claim 1 is thus required, along with the rejection of claims 3-6 at least because these claims depend from claim 1.

35 U.S.C. § 103:

Claim 2 is rejected under 35 U.S.C. § 103 as being obvious over Mikame or Miyasaka. Applicants traverse this rejection in view of the following remarks.

The Examiner acknowledges that the applied references fail to disclose the oxide-film forming treatment features of claim 2. The Examiner then contends that the use of an oxide-film forming treatment would have been “obvious” to one skilled in the art. Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness. This is because no reasons are provided to support why one would have been motivated to apply an oxide-film forming surface treatment to either of Mikame and Miyasaka. Instead, the Examiner has

AMENDMENT UNDER 37 C.F.R. § 1.111
Appln. No.: 10/781,771

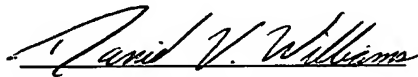
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essentially made a naked assertion of obviousness, without providing the requisite support. Further, the applied references must teach or suggest all the claimed features. It is not established how each feature of claim 2 is taught or suggested by the references. Thus, at least these basic requirements of a *prima facie* case of obviousness are absent and the rejection of claim 2 should be withdrawn. (See MPEP §2143.)

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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CUSTOMER NUMBER

Date: November 19, 2004